Computerized Screening Assessment

Data Analysis Report

Prepared for



State of Maine
Office of Substance Abuse

Prepared by



www.jhgconsulting.com 1355 Bank Street, Suite 402 Ottawa, ON, Canada K1H 8K7

Authors

Greg Graves, M.A. Richard Bell, B.B.A

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1 REPORT OVERVIEW

This report highlights the results of a recent statistical analysis on the Computerized Screening Assessment (CSA) database. Currently, the entire CSA database contains 2,455 screenings. This recent total represents an increase of 1,352 screenings, or 123% over the original population of 1,103 that was collected in 1999. The original database included offenders within the Maine prison population while the current database has expanded to include three offender populations across Maine: Prison, Community Corrections, and Drug Court.

The first section of this report explores the original distribution of severity levels for the Maine prison population.² The second section goes on to examine the current distribution of severity levels for the Maine prison population.³ We go on to highlight key trends in the distribution of the severity levels for the Prison population between 1999 and 2004. For the first time, we present a recent analysis on the distribution of severity levels within the Community Corrections and Drug Court populations. Gender differences are reviewed throughout the discussion. The third section of the report compares the distribution of severity levels in relation to the offender's first drug of choice⁴ for the Prison, Community Corrections, and Drug Court populations. In the report appendix, we present the distribution of severity levels for all site locations in the Prison, Community Corrections, and Drug Court populations.⁵

1.1 CSA SEVERITY CALCULATION

Severity levels in the CSA database are calculated by applying a statistical algorithm to the offender database. It is beyond the scope of the current analysis to engage in a detailed discussion on how the statistical algorithm found in the CSA database is used to calculate severity scores on each offender. It is important to highlight that the statistical algorithm calculates individual severity levels according to the specific characteristics of the Maine offender population and that the results are self-adjusting as new cases are entered into the database. A more complete discussion on the statistical algorithm is located in Differential Substance Abuse Treatment (DSAT) Report (1999).

¹ Prior to the statistical analysis, JHG Consulting conducted a database review on the CSA to evaluate system data and performance. After a careful review, we concluded that there are very few data inconsistencies in terms of how the CSA calculates individual and overall severity scores. We did identify some inconsistencies due to factors such as lack of access to the network, network traffic conflict, and coding corrections. Overall, the inconsistence accounted for only 2.6% of all screening cases. We presented OSA/Adcare with a plan of action on how to improve database functioning. Please refer to the CSA Database Review report (Greg Graves and Rick Bell: JHG Consulting, 2004).

² Refers to data collected and analyzed in 1999.

³ Refers to aggregate data found in the CSA database and analyzed in 2004.

⁴ Offenders identify their top three drugs of choice before completing the drug screen questionnaire, Severity of Dependence Scale (SDS). We selected offenders' first drug of choice on four major drug types (to be discussed) and compared these results to overall severity of dependence levels.

⁵ We have presented the site location information so managers and treatment providers can view severity distribution by individual work location. However, caution must be exercised as the sample size is quite small in most cases. The CSA is designed to calculate severity on the overall offender population.

⁶ Graves, Greg (M.A.) and Rotgers, Frederick (Psy.D.), "Differential Substance Abuse Treatment Model": Developed for the Maine Office of Substance Abuse and the Maine Department of Corrections on a grant provided by the U.S. Department of Health and Human Services, Center for Substance Abuse Treatment Augusta, ME (1999).

The significance of the algorithm is that severity scores are calculated according to normative data tied directly to the Maine offender population and is not based on large samples of non-offender populations. It is well known that there is a wide gap in severity scores when comparing offender populations to non-offender populations. Offenders experience more severe levels of dependence to substances across a wide range of alcohol and drug choices, providing further rationale for the CSA algorithm. As more cases are added to the database, the criteria used to determine severity cut-off scores is automatically adjusted based on the current characteristics of the overall populations.

1.2 RISK, NEED, RESPONSIVITY

Since the late 1990's, the State of Maine has increasingly adhered to the "risk, need, responsivity" principle as a core correctional treatment strategy. The screening procedures that were developed for DSAT use a system of referral assignments that is based on the principle of risk, need, responsivity. This principle asserts that the most intensive (and expensive) treatment resources are reserved for offenders with the highest levels of need/risk while less intensive services are delivered to offenders at low need/risk. This system is recommended because offenders with the highest levels of assessed need/risk are responsible for a disproportionate number of re-admissions following release.

The need principle assumes that "needs" are criminogenic offender characteristics that, when influenced, are associated with changes in recidivism. Criminogenic needs are dynamic factors that are useful in predicting risk or the offender's level of re-offending. Dynamic risk factors (i.e., criminogenic needs) are correlates of criminal activity and can be changed through treatment. Major examples of criminogenic needs include: substance abuse, cognitive skill deficits, anti-social attitudes, and weak marital/family relationships. The Maine Department of Corrections administers the Level of Supervision Inventory (LSI-IV) to identify several dynamic risk indicators requiring correctional treatment. The LSI-IV is a good example of an assessment tool that is conceptually linked to the risk, need, responsivity principle.

1.3 PROFESSIONAL OVERRIDE

The CSA is consistent with the principle of effective correctional treatment given its linkage to risk, need, responsivity and the link to evidenced-based practices. The research and development leading to the selection of the screening battery for the CSA was based on careful review of the available outcome literature. We selected a standardized assessment battery demonstrating evidence for validity and reliability in measuring dependence. There is no other method of need/risk assessment that demonstrates the accuracy of this approach based on our analysis of the correctional research literature.

⁷ Current examples include the Re-Entry Plan currently underway with the Maine Department of Corrections. In addition, the Differential Substance Abuse Treatment (DSAT) system is founded on this principle of effective correctional treatment.

⁸ Refer to Don Andrews, Jim Bonta and R. Hoge, "Classification for effective rehabilitation," *Criminal Justice and Behaviour*, 17, 1990.

At the same time, the field of psychometric/behavioral assessment cannot demonstrate complete accuracy for measuring dependence with either offender or non-offender populations. This is precisely why there is an additional correctional principle, "professional override", to be applied during the assessment process. Professional override simply holds that a treatment provider can over-turn an original screening assessment result if you identify *clear and objective counter-evidence* indicating a requirement to refer an offender to a higher (or lower) level of treatment. Professional override is only accomplished through careful decision-making, linked to file reviews and comprehensive assessments with the offender.

1.4 SCREENING/TREATMENT STRATEGY

Our recent data analysis on the CSA database reinforces the importance of linking screening results to a broader comprehensive assessment and treatment strategy. Offenders are given an initial assessment as a "temperature check" so they can consider how alcohol and drugs impact on their lives. Also, it is important at this time to point out that more in-depth assessment is required to fully understand the nature and extent of each offender's substance use pattern, undertaken in a collaborative fashion between the treatment provider and offender. The treatment provider should strive to conduct a correctional file review to determine as much information as possible on criminal and substance use behavior prior to the screening but in combination with the comprehensive assessment process.⁹

1.5 OVERALL REVIEW

We are now ready to explore the distribution of severity levels across the following groups and topics:

- Prison population (1999)
- Prison, Community Corrections and Drug Court populations (2004)
- Gender difference
- Drug types
- Site locations¹⁰

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⁹ As part of the recent review of the CSA database, we re-formatted the Screening Assessment Results Report into two sections that automatically print out immediately after the administration of the CSA. The first part of the screening report graphically displays the offender's severity of dependence and the second part presents the core responses the offender offered on the screening questionnaires. We improved the formatting on these reports so that they are easier to read. We added a note to the treatment providers and offender to highlight the fact screening results must be reviewed in combination with the comprehensive assessment in order to have a full picture on the nature and extent of use/abuse.

¹⁰ We have presented severity scores by individual site location in Appendix A. We decided to present this data for managers and treatment providers who are interested in looking up specific information at their work location. Caution should be exercised when interpreting distribution of severity where sample size is quite small.

2 DISTRIBUTION OF SEVERITY

This section analyzes the data collected regarding severity levels and the distribution of severity in 1999 and 2004. Please note the terms *Prison* and *Institution* are used interchangeably in the text and figures of this report. Also, some percentages may not add up to 100% due to rounding errors.

2.1 PRISON POPULATION (1999)

In 1999, the State of Maine administered a screening assessment battery to their Prison population of 1,103 inmates over a two-week period, using trained treatment providers who hand-scored the results. The screening was presented to offenders at six prisons across the State and accounted for approximately 70% of the overall inmate population. The results were collected and analyzed by computer, using a statistical program to determine cut-off scores and severity levels for the offender population. Severity levels are based on an offender's combined psychological and physical dependence to alcohol and drugs across the following levels: None, Low, Moderate, Substantial, and Severe. Severe.

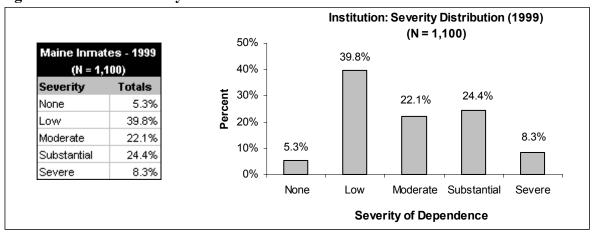


Figure 1: Prison – Severity Distribution – 1999

Figure 1 presents the distribution of severity levels for the Maine inmate population (1999).¹⁴ Only a small percentage of the inmate population has no problem (severity level of None) in relation to alcohol and drug dependence (5.3%). The remainder of the inmate population has a severity level ranging from Low, Moderate, Substantial and Severe (94.6%). The None and Low levels make up 45.1% of the inmate population. The severity levels for the majority of the inmate population (54.9%) range from Moderate, Substantial and Severe representing the high-risk group requiring the most intensive treatment services

¹¹ The hand score screening battery was imported into the Computerized Screening Assessment software system in order to automate the screening assessment process in 1999/2000.

¹² Please refer to the DSAT Model Report (1999) for a detailed discussion.

¹³ Ibid.

¹⁴ All "Figures" in this report include a numeric/percentage table and a bar graph.

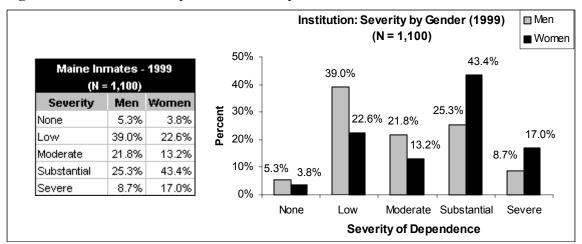


Figure 2: Prison – Severity Distribution by Gender – 1999

Figure 2 shows the severity distribution for the men and women in the Maine inmate population (1999). A comparison of the two inmate groups reveals the women have more severe patterns of substance abuse than the men. For example, 60.4% of women inmates fall into the two highest categories of substance abuse severity when compared with 34.0% of men inmates at the two highest levels. Note, however, the size of the women inmate population is much smaller than the men inmate population. Nevertheless, a quick review of Figure 2 shows 73.6% of women are at a higher level of risk (ranging from Moderate to Substantial and Severe) requiring more intensive program services.

2.2 PRISON POPULATION (2004)

This section compares the Prison /institution populations of 1999 and 2004.

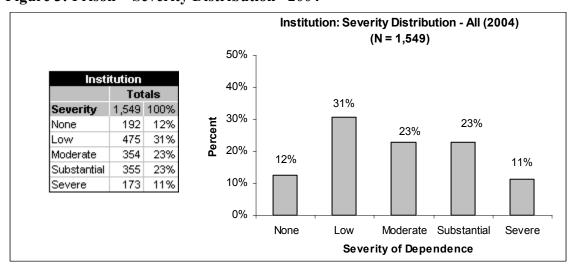


Figure 3: Prison – Severity Distribution –2004

¹⁵ The sample size collected for the Maine women's offender population in 1999 is 53.

Figure 3 shows the distribution of severity levels in the Maine inmate population (2004). Now severity levels are fairly evenly distributed from Low to Severe. Compared to 1999, a higher percentage of inmates exist with no problem (severity level of None) in relation to alcohol and drug dependence (12% in 2004 compared to 5.3% in 1999). The overwhelming majority of offenders have measurable levels of dependence, ranging from Low to Severe (88% in 2004 compared to 94.6% in 1999). The None and Low levels now make up 43% of the inmate population in 2004 compared to 45.1% in 1999.

The severity levels for roughly half of the inmate population (57%) ranges from Moderate, Substantial and Severe representing the high-risk group requiring the most intensive treatment services. The largest shift is found in the Severe level (11% in 2004 compared to 8.3% in 1999). Overall, severity is more evenly distributed across the five levels with a noticeable increase at the two extreme measurement ends (i.e., None and Severe levels) and a drop in the proportion of offenders at the Low level.

The current database contains 1,549 screenings for the Maine inmate population (2004). This recent total represents an increase of 446 screenings, or 29% over the original inmate population of 1,103 collected in 1999. The 29% increase in the inmate population led to the more even distribution of severity, an expected result of the self-adjusting nature of the CSA algorithm.

We view an increase of 29% as relatively modest over a five-year period and we anticipate the CSA database will continue to more accurately reflect the nature and extent of dependence in the inmate population as new cases are added to the database.

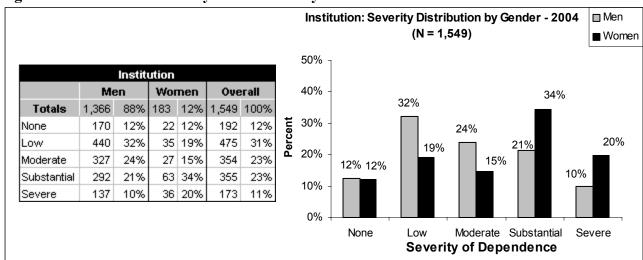


Figure 4: Institution – Severity Distribution by Gender – 2004

Figure 4 presents the distribution of severity levels for the men and women in the Maine inmate population (2004). There is a general pattern in the data when comparing men and women between 1999 and 2004. In 2004, severity is more evenly distributed across the five assessment levels with a noticeable increase in the None and Severe levels and a drop in the Low level for both men and women.

Women have a higher severity dependence profile when compared to men. For example, 54% of women inmates fall into the two highest categories of substance use severity when compared to 31% for the men inmates at the same levels. Note, however, the size of the women inmate population remains much smaller than the men inmate population. Nevertheless, a quick review of Figure 4 shows that close to 69% of women are at the three highest levels of risk requiring more intensive treatment services.

2.3 COMMUNITY CORRECTIONS POPULATION (2004)

As mentioned previously, the CSA now collects data about Community Corrections offenders. Here, we review severity distributions for the current Community Corrections population.

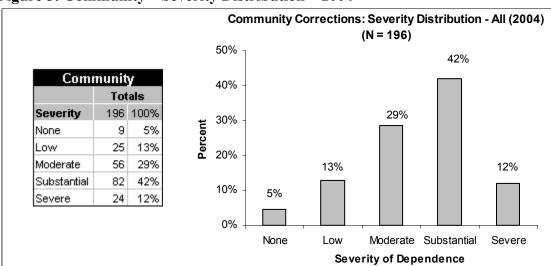


Figure 5: Community – Severity Distribution – 2004

Figure 5 shows the distribution of severity levels in the overall Community Corrections population (2004). There are a total of 196 Community Corrections offenders in the CSA database (150 men and 46 women). Unlike the Prison distribution, the Community Corrections distribution shifts towards the higher severity levels. For example, 83% of the Community offenders are in the Moderate to Severe range compared to 57% for the Prison population. The remaining Community Corrections population (19%) is located in the None and Low levels.

¹⁶ The sample size collected for the Maine women's offender population in 2004 is 183.

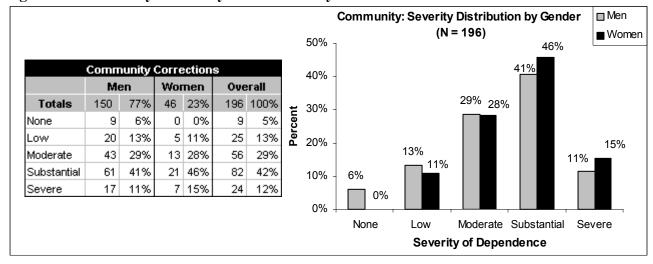


Figure 6: Community – Severity Distribution by Gender –2004

Figure 6 presents the severity distribution for the men and women in the Community Corrections population (2004). The distribution of men and women is concentrated in the higher levels. For men, 81% of the offenders have severity levels in the Moderate to Severe range compared to 89% of women offenders. There are a low proportion of offenders in the None to Low levels (19% men and 11% women). The unique feature of the women's distribution is that nobody is classified at the None level. All women have a measured level of dependence. Caution should be exercised, however, given the small sample sizes (150 for men compared to 46 for women).

2.4 DRUG COURT POPULATION (2004)

As mentioned previously, the CSA now collects data about Drug Court offenders. Here, we review severity distributions for the current Drug Court population.

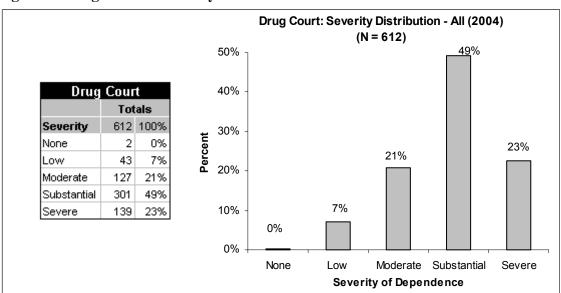


Figure 7: Drug Court – Severity Distribution – 2004

Figure 7 shows the severity distribution in the Maine Drug Court population (2004). There are a total of 612 Drug Court offenders in the CSA database (469 men and 143 women). The size of the Drug Court population is roughly three times larger than the Community Corrections population (612 and 196, respectively).

Unlike the Prison population, the distributions for Drug Court and Community Corrections populations shift towards the higher severity levels. The Drug Court population has an even higher shift upwards when compared to the community. For example, 93% of the Drug Court offenders are in the Moderate to Severe range compared to 83% for the Community Corrections population. ¹⁷ The remaining Community Corrections (18%) and Drug Court populations (7%) are located in the None and Low levels.

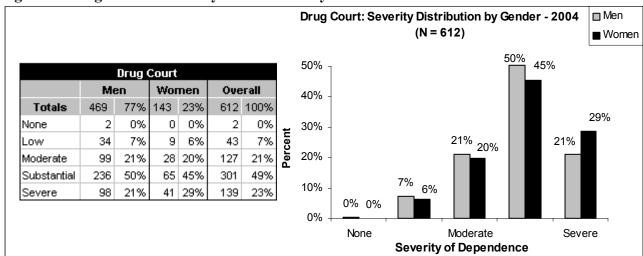


Figure 8: Drug Court - Severity Distribution by Gender - 2004

Figure 8 presents the severity distribution for men and women in the Maine Drug Court population (2004). The distribution of men and women is concentrated in the higher severity levels. For men, 93% of the offenders have severity levels in the Moderate to Severe range compared to 92% of women offenders. A very low proportion of offenders exist in the None to Low levels (7% for men and 8% for women). For the Drug Court populations, there are no cases of offenders assessed at the None level for either men or women.

3 DRUG OF CHOICE BY SEVERITY LEVEL

This section of the report moves beyond the review of severity levels in the Maine offender population to examine key variables in the CSA database. We test the relationship between offenders' designated drug of choice and severity levels to see if the CSA is behaving as we expect when considering the drug patterns of offenders we now understand.

¹⁷ The Prison population has a lower proportion of offenders in the Moderate to Severe range at 48%, as discussed earlier.

We examined responses to the CSA drug questionnaire, Severity of Dependence Scale (SDS), to identify each offender's first drug of choice within the offender populations. The introduction to the SDS asks offenders to identify up to three top drugs of choice before answering a series of five questions on each drug. We only selected cases where offenders chose a top drug of choice, and then we compared this to the distribution of severity. We examined the major drug types listed in the SDS (i.e., marijuana, prescription drugs, cocaine and heroin) and stored in the CSA database. ¹⁸

Specifically, we started with the following assumptions prior to the analysis of the database:

- We anticipate drugs with a higher addictive liability (e.g., prescription drugs, heroin and cocaine) are likely to produce a more severe dependence profile when compared to a drug with a lower addictive liability (e.g., marijuana).
- We anticipate differences in the choice of drug types by women and men and the distribution of severity associated with these drug choices (e.g., a higher proportion of women selecting prescription drugs and a higher proportion of men selecting marijuana as their top drug of choice).
- We anticipate key differences in the distribution of severity levels when comparing Prison/Institution and Community Corrections populations and their main drugs of choice (e.g., related to the higher proportion of more severe levels of dependence we observed for Community offenders in the previous section of the report).

3.1 OFFENDERS' DRUGS OF CHOICE

The following information pertains to the drugs of choice for the Prison/Institution, Community Corrections, and Drug Court populations.

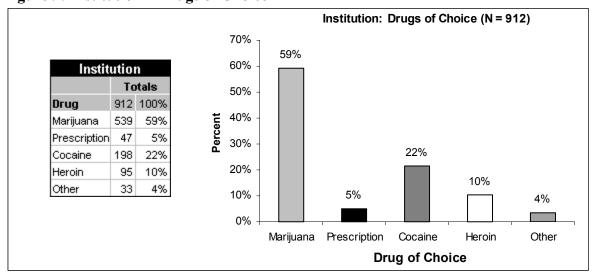


Figure 9: Institution – Drugs of Choice

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¹⁸ Alcohol was not among the list of drugs of choice because we examined responses to the SDS questionnaire, which measures only drug usage. The CSA could include alcohol for consideration as a drug of choice at a later point in time.

Figure 9 shows the distribution of the 912 cases within the inmate population who identified a top drug of choice. ¹⁹

The major drug of choice for the inmate population is marijuana (59%) followed by cocaine (22%) and heroin (10%). A smaller proportion of inmates selected prescription drugs (5%) while the remaining cases where classified as "other" (4%).²⁰

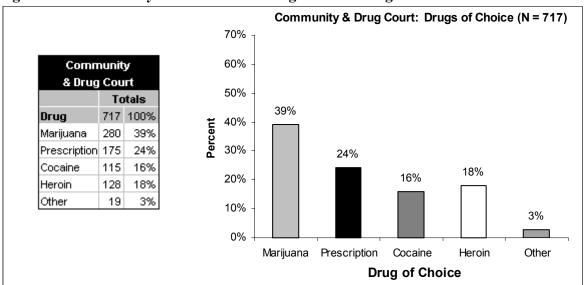


Figure 10: Community Corrections & Drug Court – Drugs of Choice

Figure 10 shows the distribution of 717 cases within the combined populations of Community Corrections and Drug Court who identified a top drug of choice²¹.

The selection of major drug of choice is more evenly distributed in Community Corrections when compared to the Prison inmate population. Although at a lower percentage compared to the Prison inmate population (59%), the top drug of choice for community offenders is marijuana (39%). The next popular drug choice in the Community follows closely as prescription drugs (24%). Heroin (18%) and cocaine (16%) are fairly close in popularity while the category of other (3%) was only selected in a few instances.

²¹ Ibid

¹⁹ We have calculated the percent distribution against drug choice selection based on the total number of offenders who identified a specific drug of choice.

²⁰ Although the CSA collects responses about 'Other' drugs, the CSA database category of 'Other' is not included in this report. For reporting purposes, 'Other' refers to tallies of amphetamines and LSD/hallucinogens as drugs of choice among CSA respondents. The tallies were combined as 'Other' due to their very small sample size. The CSA screening battery provides six standard choices for drugs (cocaine, heroin, marijuana, prescription drugs, amphetamines, and LSD/hallucinogens). While the respondent also may specify 'Other' if his/her usage does not include these standard choices, to date no offender has utilized the 'Other' option during a CSA screening. Data on nicotine, which was collected during the hand-administered screenings discussed in this report under the section Prison Population (1999), has been classified as 'Other' in the CSA database and is retained only for historical purposes. Nicotine is not among the standard drug choices in the CSA.

3.2 OFFENDERS' DRUGS OF CHOICE BY GENDER

The following information pertains to the drugs of choice separated by gender for each population.

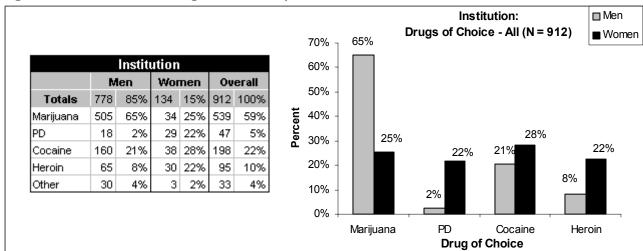


Figure 11: Institution – Drug Of Choice by Gender

Figure 11 shows the inmate population who identified a top drug of choice is 912 (778 men and 134 women). The bar chart shows men select marijuana at a substantially higher proportion when compared to women (65% men and 25% women) whereas women select prescription drugs at over ten times the rate when compared to men (22% women and 2% men). Men and women make a fairly even selection when the drug of choice is cocaine (21% men and 28% women) but women select heroin at over double the proportion when compared to men (22% women and 8% men). Overall, the major drug of choice for the inmate population is marijuana (59%) followed by cocaine (22%) and heroin (10%). A smaller proportion of inmates selected prescription drugs (10%) while the remaining cases are classified as other (4%).

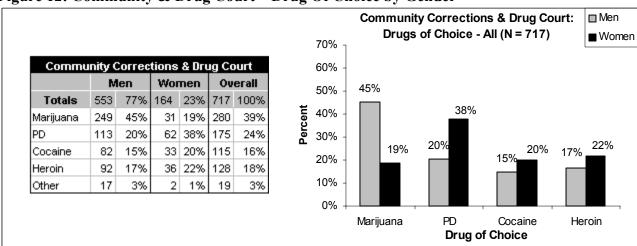


Figure 12: Community & Drug Court – Drug Of Choice by Gender

Figure 12 shows offenders in the Community Corrections and Drug Court populations who selected a top drug of choice are 712 (553 men and 164 women). The bar chart shows that men selected marijuana at double the ratio when compared to women (45% men and 19% women), whereas women selected prescription drugs at double the ratio when compared to men (38% women and 20% men). The drug of choice for cocaine (15% men and 20% women) and heroin (17% men and 22% women) are more evenly distributed for men and women. The major drug of choice for the Community population is marijuana (39%) but at a much lower rate than in the Prison population (59%). For the Community population, the next popular choices are prescription drugs (24%), heroin (18%), and cocaine (16%). A much smaller proportion of the community offender population selected other (4%).

3.3 Individual Drug Choices and Severity

The following information pertains to specific drugs of choice for each population.

3.3.1 Marijuana

As the most common drug of choice among offenders, we discuss marijuana first.

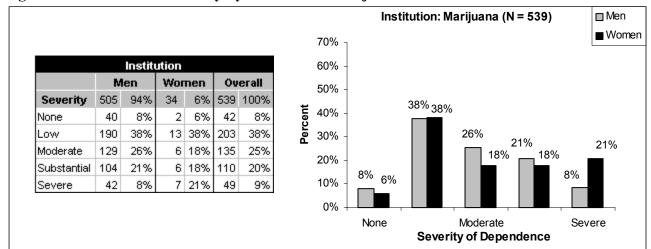


Figure 13: Institution – Severity by Gender for Marijuana

Figure 13 shows the severity distribution for marijuana as the main drug of choice for the inmate population. A total of 539 inmates selected marijuana as their first drug of choice (505 men and 34 women). The overall pattern of distribution of severity levels for marijuana shows offenders are spread out across the five severity levels. A large proportion of offenders have either a None (8% men and 6% women) or Low severity level (38% men and 38% women). Fifty-five percent of Prison inmates who selected marijuana are either Moderate, Substantial or Severe. A higher proportion of men concentrate at the Moderate level when compared to women (26% and 18%, respectively) and a significantly higher proportion of women are at a Severe level when compared to men (21% and 8%,

respectively). In summary, 37% of men selected marijuana compared to only 19% of women in relation to the overall Prison population found in the CSA. ²²

Community Corrections & Drug Court: ■ Men Marijuana (N = 280) ■ Women 70% 60% Community Corrections & Drug Court Men Women Overall 50% 42% 249 89% 31 11% 280 100% Severity 40% None 0 0% 2 1% 2 1% 27% 29% 29% 30% Low 37 15% 6 19% 43 15% 23% 19% Moderate 66 27% 9 29% 75 27% 16% 20% Substantial 104 42% 9 29% 113 40% 10% 16% 7 23% 47 Severe 40 17% 1% 0% 0% Moderate None Severe **Severity of Dependence**

Figure 14: Community & Drug Court – Severity by Gender for Marijuana

Figure 14 shows the distribution of severity for marijuana as the main drug of choice in the Community Corrections and Drug Court populations. A total of 280 offenders selected marijuana as their first drug of choice (249 men and 31 women). The choice of marijuana for the Community population is different when compared to the Prison population. Almost no offenders assessed at the None level (1% men and 0% women). The proportion of offenders who are assessed at the Low level (15% men and 19% women) is close to half the estimate for the Prison inmates at this level. A very high proportion of Community offenders have a Substantial level of dependence, with men at a higher level compared to women (42% men and 29% women). Women have a higher proportion at the Severe level when compared to men (23% women and 16% men). In summary, 40% of men selected marijuana compared to only 16% of women in relation to the overall Community Corrections and Drug Court populations located in the CSA

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²² To derive the overall calculation of drug choice we divided the total count for an individual drug for men or women by the total count of offenders in the CSA database.

3.3.2 Prescription Drugs

Here, we discuss prescription drugs as the next drug of choice.

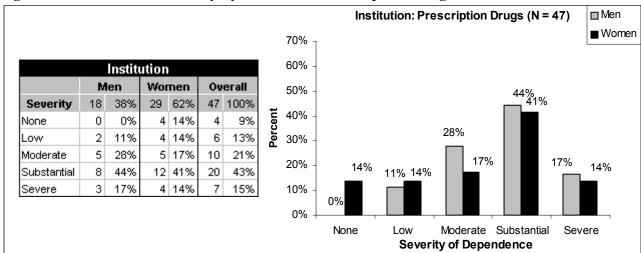


Figure 15: Institution – Severity by Gender for Prescription Drugs

Figure 15 shows the severity distribution for prescription drugs as the main drug of choice in the Institution population. A total of 47 inmates selected prescription drugs as their first drug of choice (18 men and 29 women).²³ The overall pattern of distribution for prescription drugs shows an increased proportion of offenders in the higher severity levels. Seventy-nine percent of the population assessed at Moderate, Substantial, and Severe (much higher when compared to the 54% level for marijuana).²⁴ The choice of prescription drugs has a relatively low distribution of offenders at the None and Low severity levels (22%).

Figure 15 displays gender differences in relation to severity levels and prescription drugs. The bar graph shows a fairly constant distribution of severity levels for both men and women except a higher proportion of women at the None level compared to men (14% women and 0% men) and a higher proportion of men with Moderate severity compared to women (28% men and 17% women). In summary, only 1.3% of men selected prescription drugs compared to 16% of women in relation to the overall Community Corrections and Drug Court populations found in the CSA.

²³ A sample size of 47 is quite small so caution should be exercised.

²⁴ Refer back to Figure 13 for the prescription drug table and graph.

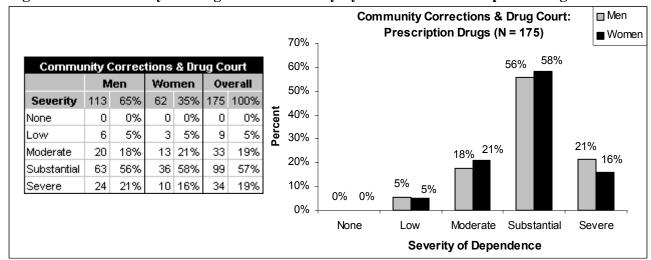


Figure 16: Community & Drug Court – Severity by Gender for Prescription Drugs

Figure 16 shows the severity distribution for prescription drugs as the main drug of choice by the Community Corrections and Drug Court populations. A total of 175 offenders selected prescription drugs as their first drug of choice (113 men and 62 women). The overall distribution pattern of severity for prescription drugs shows an increased proportion of offenders in the higher severity levels. Ninety-five percent of the population assessed at Moderate, Substantial, and Severe. There is only a small proportion of offender in the None and Low levels (0% and 5%, respectively).

Figure 16 also displays gender differences in relation to severity levels and prescription drugs. The bar graph shows a fairly constant distribution of severity for both men and women except a slightly higher proportion of women at Moderate and Substantial levels (2-3% difference higher) than men, and a higher proportion of men with a Severe level compared to women (21% men and 16% women). In summary, 34% of women selected prescription drugs compared to only 18% of men in relation to the overall Community Corrections and Drug Court populations found in the CSA.

3.3.3 Heroin

Here, we discuss heroin as a drug of choice among offenders.

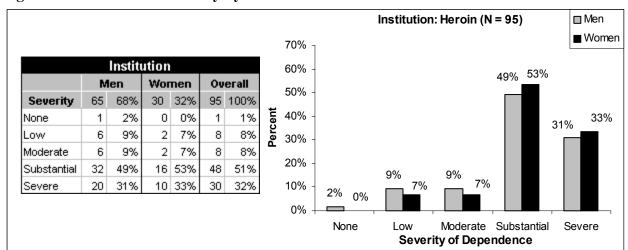


Figure 17: Institution – Severity by Gender for Heroin

Figure 17 shows the severity distribution for heroin as the main drug of choice for the inmate population. A total of 95 inmates selected heroin as their first drug of choice (65 men and 30 women). The overall distribution pattern for heroin shows an extremely high concentration of offenders in the highest severity levels. Eighty-three percent of the population assessed at Substantial and Severe and the addition of the Moderate level increases the overall percentage to 91%. This is a much higher rate of severity when compared to the previous distributions for marijuana (54%) and equal to that of prescription drugs (91%). There is a very low distribution for heroin at the None (1%) and Low level (8%).

Figure 17 also displays gender differences in relation to severity levels and heroin. The bar graph shows a fairly constant distribution for both men and women across all severity levels (2% gap, except Substantial, at a 4% gap). In summary, 16% of women selected heroin compared to 5% of men in relation to the overall inmate population found in the CSA.

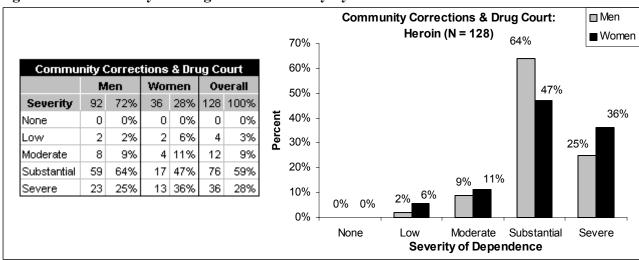


Figure 18: Community & Drug Court – Severity by Gender for Heroin

Figure 18 shows the severity distribution for heroin as the main drug of choice in the Community Corrections and Drug Court populations. A total of 128 offenders selected heroin as their first drug of choice (92 men and 36 women). The overall distribution pattern for heroin again shows an increased proportion of Community offenders in the higher severity levels. Ninety-six percent of this population is Moderate, Substantial, or Severe. Only a small proportion of offenders exist at the Low level (3%), and no offenders exist at the None level.

Figure 18 also displays gender differences in relation to severity levels and heroin. The bar graph shows some differences in the patterns of severity for men and women, particularly at the Substantial level where men exhibit a higher rate compared to women (64% men and 47% women), and the Severe level where women exhibit a higher rate compared to men (36% women and 25% men). In summary, 19% of women selected heroin compared to 15% of men in relation to the overall Community Corrections and Drug Court populations found in the CSA.

3.3.4 Cocaine

Here, we discuss cocaine as a drug of choice among offenders.

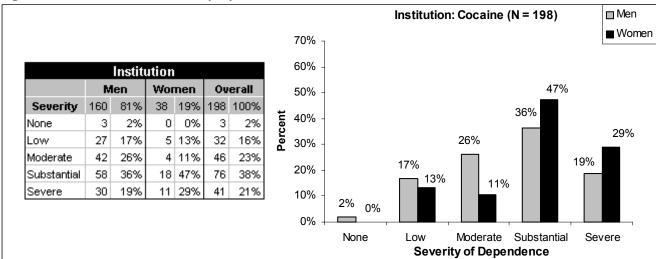


Figure 19: Institution – Severity by Gender for Cocaine

Figure 19 shows the severity distribution for cocaine as the main drug of choice by the Prison inmate population. A total of 198 inmates selected cocaine as their first drug of choice (160 men and 38 women). Almost every offender with cocaine as the first drug of choice has a measured level of dependence (98%) and only 2% of the inmate population has no problem.

Figure 19 also displays gender differences in relation to severity levels and cocaine. The bar graph shows men have a slightly higher proportion at the Low severity (17% men and 13% women) and substantially higher rate at the Moderate level (26% men and 11% women) but women have a higher proportion at the Substantial level (47% women and 36% men) and the Severe level (29% women and 19% men). In summary, 21% of women selected cocaine compared to 12% of men in relation to the overall inmate population found in the CSA.

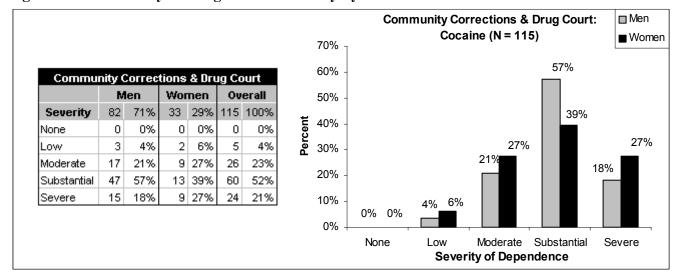


Figure 20: Community & Drug Court – Severity by Gender for Cocaine

Figure 20 shows the severity distribution for cocaine as the main drug of choice for the Community Corrections and Drug Court populations. A total of 115 offenders selected cocaine as their first drug of choice (82 men and 33 women). The overall pattern of distribution for cocaine shows the overwhelming majority of community offenders have a dependence level at one of the three highest levels of severity (96%). There is only a small proportion of offender in the levels of Low (4%) or None (0%).

Figure 20 displays gender differences in relation to severity levels and cocaine. The bar graph shows there is a relatively consistent pattern of severity for men and women with the exception of the Substantial level where men have a considerably higher rate than women (57% men and 39% women). In summary, 17% of women selected cocaine compared to 13% of men in relation to the overall Community Corrections and Drug Court populations found in the CSA.

4 REPORT FINDINGS

In this section we describe the findings of our data analysis.

4.1 Prison Population

This section describes our findings related to the Prison/Institution population collected in the CSA.

4.1.1 Observations

The following observations were made of the Prison/Institution population.

- There are currently 1,549 inmates screened by the CSA (2004), representing a 29% increase over a five-year period.
- In 1999, the severity distribution was heavily concentrated at the lower levels while the remainder of the inmates fell into the levels Moderate, Substantial, and Severe.

- In 2004, the distribution of severity in the prison population is fairly evenly spread across all five levels.
- The self-adjusting nature of the CSA is clear when you consider that the increase in population size shifted the inmates across the five levels of dependence to a more even distribution based on the new cases added.

4.1.2 Trend Analysis

We observed the following shifts in severity to the overall population.

- There are more inmates assessed at a low severity level.
- There are more inmates assessed at a severe severity level.
- The majority of the inmate population is now assessed across the Low, Moderate and Substantial levels.

4.1.3 Program Referrals (2004)

The following program referrals are noted for the Prison/Institution population.

- There are 140 inmates assessed at the None level and likely require no treatment.
- There are 475 inmates assessed as Low and likely require educational/prevention programming.
- The remaining 882 inmates are assessed as having a level of psychological and physical dependence that likely requires a Level 3, 4, or 5 Cognitive Behavioral Treatment (CBT) program.
- The proportion of inmates assessed as Severe has increased close to 3% over the past five years (8.2% in 1999 and 11% in 2004).
- There are 173 inmates with a Severe level of dependence and likely require the most intensive treatment response.
- Women continue to have a more severe profile than men, 54% of women were assessed at Substantial and Severe compared to 31% of men.

4.2 COMMUNITY POPULATION

This section describes our findings related to the Community Corrections population collected in the CSA.

4.2.1 Observations

The following observations were made of the Community Corrections population.

- A total of 196 Community Corrections offenders were screened into the CSA since it was set-up in the community (2001).²⁵
- The distribution of severity in the Community offender population matches a high risk/need group of offenders, with 81% concentrated in the three highest severity levels (i.e., Moderate, Substantial, and Severe). Less than 20% of the community offender population was assessed at None or Low.
- The Community Corrections population displays a similar distribution of severity for both men and women.

4.2.2 Program Referrals (2004)

The following program referrals are noted for the Community Corrections population.

- There are 9 offenders assessed at None and likely require no treatment.
- There are 25 offenders assessed as Low and likely require educational/prevention programming.
- The remaining 162 offenders are assessed as having a level of psychological and physical dependence that likely requires a Level 3, 4, or 5 CBT program.
- The overwhelming majority of the community offender population (92%) is concentrated at the three highest levels of severity (i.e., Moderate, Substantial, and Severe). This type of profile matches offenders requiring a differential level of CBT programming.

²⁵ This is a relatively small sample size (196).

4.3 DRUG COURT POPULATION

This section describes our findings related to the Drug Court population collected in the CSA.

4.3.1 Observations

The following observations were made of the Drug Court population.

- A total of 612 Drug Court offenders were screened into the CSA since it was set-up in the community (2001). This number represents a sizeable group of offenders requiring some form of programming.²⁶
- The distribution of severity in the Drug Court offender population matches a high risk/need group of offenders, concentrated in the three highest severity levels (i.e., Moderate, Substantial, and Severe). Less than 7% of the Drug Court offender population was assessed at None or Low.
- The Drug Court population displays a similar distribution of severity levels for both men and women.

4.3.2 Program Referrals (2004)

The following program referrals are noted for the Drug Court population.

- There are 2 offenders assessed at None and likely require no treatment.
- There are 43 offenders are assessed as Low and likely require educational/prevention programming.
- The remaining 567 offenders are assessed as having a level of psychological and physical dependence that likely requires a Level 3, 4, or 5 CBT program.
- The majority of the Drug Court offender population (93%) is concentrated at the three highest levels of severity (i.e., Moderate, Substantial, and Severe). There are no women assessed at None in Drug Court but the overall distribution of severity between men and women is otherwise fairly similar.
- The overwhelming majority of Drug Court offenders have a risk/need profile that suggests some form of differential treatment is required.

²⁶ There are 0% of Drug Court offenders assessed at none.

4.4 DRUG OF CHOICE AND LOCATION

There are clear differences between drug of choice and offender location (i.e., Prison or Community).²⁷ Clearly marijuana is the highest-ranked drug of choice at both Prison and Community sites, although even more popular in prisons. Conversely, prescription drug use and heroin are considerably more popular in the Community when compared to the Prison. The data analysis does not explain the reasons for the gaps between Prison and Community locations, but these patterns likely reflect access and availability of drug types in these environments.

4.4.1 Drug of Choice by Gender

There are clear trends between drug of choice and gender. At Prison, men select marijuana as their drug of choice at twice the rate compared to women (exact pattern in the Community). Women select prescription drugs at ten times the rate of men, and heroin at two times the rate of men. In the Community, women select prescription drugs at twice the rate of men.

4.4.2 Drug Type Severity Profiles

The following section describes characteristics of severity given certain drugs of choice.

4.4.2.1 Marijuana

When marijuana is selected as the top drug of choice, the distribution of severity is fairly even in the Prison although the same selection of marijuana in the Community produces a higher severity profile for the top levels of dependence. Also, a much higher proportion of men selected marijuana compared to women.²⁸

4.4.2.2 Prescription Drugs

When prescription drugs are selected as the top drug of choice, the distribution of severity matches a high risk/need profile for the Prison and Community. Most offenders are located in the Moderate, Substantial, and Severe levels. More importantly, a much higher proportion of women selected this choice compared to men.²⁹

4.4.2.3 Heroin

When heroin is selected as the top drug of choice, the distribution of severity matches a high risk/need profile for the Prison and Community. Heroin produces the most extreme profile compared to any drug of choices with the majority of the cases actually concentrated in the two highest dependence levels, Substantial and Severe. This unique finding is not surprising given heroin has

²⁷ In this section of the report, the term Community refers to the combination of drug-taking individuals from the Community Corrections and Drug Court populations.

²⁸ In prison, 19% of women in the CSA selected marijuana compared to 37% for men. In the community, the percentage distribution is 16% for women and 40% for men.

²⁹ In prison, 16% of women in the CSA selected prescription drugs compared to 1.3% for men. In the community, the percentage distribution is 34% for women and 18% for men.

one of the highest addictive liabilities of all known drugs (top three). In addition, a much higher proportion of women selected this choice compared to men.³⁰

4.4.2.4 Cocaine

When cocaine is selected as the top drug of choice, the distribution of severity matches a high risk/need profile for the Prison and Community. Cocaine produces a very high severe profile, with the majority of the cases still actually concentrated in the two highest dependence levels, Substantial and Severe. In the Community, over 50% of offenders have a Substantial level of dependence when they select cocaine as the first drug of choice. This finding is not surprising given cocaine has one of the highest addictive liabilities of all drugs (top three). In addition, a much higher proportion of women selected this choice compared to men. ³¹

4.4.3 Drug of Choice Assumptions

This section describes assumptions about drug of choice.

4.4.3.1 Addictive Liability

There is clearly a relationship between additive liability of the drug of choice and the overall distribution of severity. We view the CSA as producing a very clear and striking pattern: a drug with lower addictive liability like marijuana has a less severe dependence profile compared to drugs of higher liability, like cocaine, heroin, and prescription drugs.

4.4.3.2 Gender

There is a clear pattern of drug of choice and severity when comparing men and women. Marijuana does not produce a high risk/need profile. Nevertheless, marijuana is indeed a popular choice for men. Both groups demonstrate a high-risk pattern for drugs with a higher addictive liability, but women show a much higher preference for selecting prescription drugs as their main choice.

4.4.3.3 Location

Community offenders display a higher severity profile when selecting high liability drugs when compared to Prison inmates. Both show a high-risk pattern, but there is simply a higher proportion of Community offenders located in the Substantial and Severe levels when compared to their prison counterparts for drugs such as heroin, cocaine, and prescription drugs.

4.5 CONCLUSION

Overall, these findings sharply increase our confidence that the CSA accurately predicts severity within the Maine offender population. Researchers use the term, "criterion validity," to describe how well scores on a measure relate to non-test (real world) behaviors. We view evidence-based research as the appropriate standard to refer offenders into treatment and to monitor outcome.

³⁰ In prison, 16% of women in the CSA selected heroin compared to 5% for men. In the community, the percentage distribution is 19% for women and 15% for men.

³¹ In prison, 21% of women in the CSA selected cocaine compared to 12% for men. In the community, the percentage distribution is 17% for women and 13% for men.

The two researchers on this project now have a renewed confidence in the practical application of the CSA in Maine and look forward to feedback from those working in the field.

5 RECOMMENDATIONS

We recommend the following action steps:

- DSAT providers exercise autonomy in corrections and criminal justice locations to refer offenders into appropriate levels of treatment.
- **DSAT providers** have the autonomy to refer offenders to either higher or lower levels of program intensity based on the use of validated and reliable screening and assessment tools.
- DSAT providers start using standardized forms to monitor decisions of professional override in an objective manner.
- *OSA* conducts an analysis of the CSA database to examine the professional override forms in an objective and measurable fashion.
- **OSA** conducts ongoing consultation with DSAT providers to solicit feedback on the validity of the CSA and its practical application in the field.
- *OSA* conducts ongoing analysis of the CSA database to reflect the constantly shifting patterns of offenders processed through DSAT and the self-adjusting nature of the algorithm.

APPENDIX A DISTRIBUTION OF SEVERITY BY SITE

The following tables represent breakdowns by site of severity statistics for offenders in each population, (Prison/Institution, Community Corrections, Drug Court).

A.1 PRISON/INSTITUTION

1. BCF	Me	en
Totals	2	100%
None	0	0%
Low	2	100%
Moderate	0	0%
Subst.	0	0%
Severe	0	0%

4. MCI	Men			
Totals	1	100%		
None	0	0%		
Low	0	0%		
Moderate	1	100%		
Subst.	0	0%		
Severe	0	0%		

2. CCF	Men			
Totals	6	100%		
None	1	17%		
Low	2	33%		
Moderate	2	33%		
Subst.	1	17%		
Severe	0	0%		

5. MSP	Men		
Totals	1	100%	
None	0	0%	
Low	0	0%	
Moderate	1	100%	
Subst.	0	0%	
Severe	0	0%	

3. DCF	Men				
Totals	2	100%			
None	0	0%			
Low	0	0%			
Moderate	0	0%			
Subst.	1	50%			
Severe	1	50%			

6. MCC	6. MCC Men		Women		Overall	
Totals	1,344	88%	183	12%	1,527	100%
None	170	13%	22	12%	192	12%
Low	440	32%	35	19%	475	31%
Moderate	327	24%	27	15%	342	23%
Subst.	292	21%	63	34%	355	23%
Severe	137	10%	36	20%	173	11%

A.2 COMMUNITY CORRECTIONS

1. Aub	Men		Women		Overall	
Totals	39	71%	16	29%	55	100%
None	2	5%	0	0%	2	4%
Low	4	10%	2	13%	6	11%
Moderate	8	21%	7	44%	15	27%
Subst.	18	46%	6	38%	24	44%
Severe	- 7	18%	1	6%	8	15%

2. Ban	Men		Women		Overall		
Totals	38	88%	5	12%	43	100%	
None	2	5%	0	0%	2	5%	
Low	4	11%	1	20%	5	12%	
Moderate	18	47%	2	40%	20	47%	
Subst.	12	29%	1	20%	13	28%	
Severe	3	8%	1	20%	4	9%	

3. Bid	ħ	Men		Women		Overall	
Totals	- 7	100%	0	0%	- 7	100%	
None	0	0%	0	0%	0	0%	
Low	0	0%	0	0%	0	0%	
Moderate	2	29%	0	0%	2	29%	
Subst.	5	71%	0	0%	5	71%	
Severe	0	0%	0	0%	0	0%	

4. Cal	N	Men		Women		Overall	
Totals	21	78%	6	22%	27	100%	
None	0	0%	0	0%	0	0%	
Low	1	5%	0	0%	1	4%	
Moderate	7	33%	2	33%	9	33%	
Subst.	8	38%	4	67%	12	44%	
Severe	5	24%	0	0%	5	19%	

5. Mac	Men		Women		Overall	
Totals	3	100%	0	0%	3	100%
None	0	0%	0	0%	0	0%
Low	1	33%	0	0%	1	33%
Moderate	1	33%	0	0%	1	33%
Subst.	1	33%	0	0%	1	33%
Severe	0	0%	0	0%	0	0%

6. MCC	Men		Women		Overall	
Totals	5	63%	3	38%	8	100%
None	0	0%	0	0%	0	0%
Low	0	0%	0	0%	0	0%
Moderate	1	20%	0	0%	1	13%
Subst.	4	80%	2	67%	6	75%
Severe	0	0%	1	33%	1	13%

7. Por	Men		Wο	men	Overall		
Totals	12	52%	11	48%	23	100%	
None	0	0%	0	0%	0	0%	
Low	0	0%	1	9%	1	4%	
Moderate	2	17%	1	9%	3	13%	
Subst.	10	83%	5	45%	15	65%	
Severe	0	0%	4	36%	4	17%	

8. Rum	Men		Women		Overall	
Totals	5	71%	2	29%	- 7	100%
None	0	0%	0	0%	0	0%
Low	0	0%	0	0%	0	0%
Moderate	1	20%	1	50%	2	29%
Subst.	3	60%	1	50%	4	57%
Severe	1	20%	0	0%	1	14%

9. Spr	M	len	Women		Overall	
Totals	20	87%	3	13%	23	100%
None	5	25%	0	0%	5	22%
Low	10	50%	1	33%	11	48%
Moderate	3	15%	0	0%	3	13%
Subst.	1	5%	2	67%	3	13%
Severe	1	5%	0	0%	1	4%

A.3 DRUG COURT

1. Aub	Men		Wo	Women		Overall	
Totals	54	82%	12	18%	66	100%	
None	0	0%	0	0%	0	0%	
Low	5	9%	0	0%	5	8%	
Moderate	10	19%	1	8%	11	17%	
Subst.	27	50%	6	50%	33	50%	
Severe	12	22%	5	42%	17	26%	

7. Mac	Men		Women		Overall	
Totals	8	67%	4	33%	12	100%
None	0	0%	0	0%	0	0%
Low	1	13%	0	0%	1	8%
Moderate	1	13%	1	25%	2	17%
Subst.	5	63%	2	50%	7	58%
Severe	1	13%	1	25%	2	17%

2. Ban	М	en	Women		Overall	
Totals	79	70%	34	30%	113	100%
None	0	0%	0	0%	0	0%
Low	4	5%	4	12%	8	7%
Moderate	19	24%	4	12%	23	20%
Subst.	34	43%	15	44%	49	43%
Severe	22	28%	11	32%	33	29%

8. Рог	Men		Women		Overall	
Totals	169	80%	42	20%	211	100%
None	1	1%	0	0%	1	0%
Low	15	9%	5	12%	20	9%
Moderate	36	21%	9	21%	45	21%
Subst.	88	52%	16	38%	104	49%
Severe	29	17%	12	29%	41	19%

3. Bid	М	en	Women		Overall	
Totals	61	84%	12	16%	73	100%
None	0	0%	0	0%	0	0%
Low	4	7%	0	0%	4	5%
Moderate	13	21%	4	33%	17	23%
Subst.	31	51%	7	58%	38	52%
Severe	13	21%	1	8%	14	19%

9. Rum	М	Men		Women		Overall	
Totals	21	72%	8	28%	29	100%	
None	0	0%	0	0%	0	0%	
Low	1	5%	0	0%	1	3%	
Moderate	1	5%	2	25%	3	10%	
Subst.	10	48%	4	50%	14	48%	
Severe	9	43%	2	25%	11	38%	

4. Cal	Men		Wo	Women		Overall	
Totals	53	68%	25	32%	78	100%	
None	1	2%	0	0%	1	1%	
Low	1	2%	0	0%	1	1%	
Moderate	15	28%	5	20%	20	26%	
Subst.	30	57%	14	56%	44	56%	
Severe	6	11%	6	24%	12	15%	

10. Spa	Men		Women		Overall	
Totals	1	100%	0	0%	1	100%
None	0	0%	0	0%	0	0%
Low	0	0%	0	0%	0	0%
Moderate	0	0%	0	0%	0	0%
Subst.	0	0%	0	0%	0	0%
Severe	1	100%	0	0%	1	100%

5. CCF	Men		Women		Overall	
Totals	1	50%	1	50%	2	100%
None	0	0%	0	0%	0	0%
Low	0	0%	0	0%	0	0%
Moderate	0	0%	0	0%	0	0%
Subst.	1	100%	0	0%	1	50%
Severe	0	0%	1	100%	1	50%

11. Spr	Men		Women		Overall	
Totals	17	89%	2	11%	19	100%
None	0	0%	0	0%	0	0%
Low	1	6%	0	0%	1	5%
Moderate	4	24%	1	50%	5	26%
Subst.	8	47%	0	0%	8	42%
Severe	4	24%	1	50%	5	26%

6. DCF	Men		Women		Overall	
Totals	5	63%	3	38%	8	100%
None	0	0%	0	0%	0	0%
Low	2	40%	0	0%	2	2%
Moderate	0	0%	1	33%	1	1%
Subst.	2	40%	1	33%	3	3%
Severe	1	20%	1	33%	2	2%